

Appl. No. 10/753,621

Amdt. dated 01/03/2006

Reply to Office action of 10/05/2005

### AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0001] with the following amended paragraph:

[0001] This application is a division of 09/879,252, filed on June 12, 2001, now Pat. No. 6,703,838, which is a Continuation-in-Part of U.S. Application Ser. No. 09/610,573 filed on July 5, 2000, now abandoned, which is a division of U.S. Application Serial No. 09/290,156 filed on April 12, 1999, now abandoned, which claimed priority of a provisional U.S. Application Serial No. 60/081,653, filed on April 13, 1998 and entitled "ELECTROMAGNETIC INDUCTION METHOD AND APPARATUS FOR THE MEASUREMENT OF THE ELECTRICAL RESISTIVITY OF ROCK FORMATIONS BETWEEN DRILL HOLES CASED WITH STEEL."

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Please replace the abstract with the following amended paragraph:

~~An electromagnetic tomography system for determining properties of geological formation penetrated by at least one borehole lined with a conductive tubular includes a transmitter disposed in a first borehole and adapted to induce a magnetic field, a first receiver disposed in the first borehole and adapted to detect a magnetic field induced in the conductive tubular by the transmitter, and a second receiver adapted to detect a magnetic field induced in the geological formation by the transmitter. A method for determining a conductive tubular correction constant includes generating a magnetic field inside a representative piece of the conductive tubular, determining a first magnetic field amplitude inside the representative piece of the conductive tubular at a location proximate to a position of the generating a magnetic field, determining a second magnetic field amplitude outside the representative piece of the conductive tubular, and deriving the conductive tubular correction constant from a ratio of the first magnetic field amplitude and the second magnetic field amplitude.~~ An electromagnetic tomography system for determining properties of a geological formation penetrated by a borehole lined with a conductive tubular, the system having a first transmitter disposed in the borehole and adapted to induce a magnetic field in the geological formation, a receiver disposed in the borehole at a distance of at least 10 meters from the first transmitter so that the receiver is primarily sensitive to the magnetic field induced in the geological formation by the first transmitter, and a second transmitter disposed in the same borehole as the receiver at a distance from the receiver selected so that the receiver is mainly sensitive to a magnetic field induced in the conductive tubular by the second transmitter.